

## Chapter Four

### A PRACTICAL APPROACH IN PREDICTING TURNING POINTS OF THE FINANCIAL MARKETS

#### 1. Introduction

In the early 2000s, the main reason investors suffered substantial losses was a lack of a disciplined investment process. The investment process is based on the assessment of risk. Risk changes as the business cycle moves through the various phases. The keystone of an investment process is the development of an investment strategy to take advantage of the changing risk of the financial markets.

We use economic indicators to recognize financial risk. The indicators are identified as leading, coincident, and lagging indicators of the business cycle. The leading indicators reflect trends in the financial markets and define the current phase of the financial cycle. Leading indicators lead the business cycle. The coincident indicators define the current business cycle and its trend. The lagging indicators follow, or lag, the trend of the business cycle. They are important to measure the excesses existing in the system. As such, they help to measure financial risk.

These indicators are used to identify and predict turning points in business and financial cycles. Depending on the direction and configuration of these indicators, we can anticipate the likely direction of the stock market, commodity prices, interest rates, and the dollar. An appreciation of these relationships tells us the direction of risk in each phase of the market cycle.

In this chapter, we analyze markets from a practitioner's viewpoint. Our goal is to understand how risk changes for each market and how to change an investment portfolio. This chapter shows the practical side of what has been presented in previous pages. It shows how to respond in various market situations.

#### 1. Games, investment scenarios, and strategies

We tend to think, 'buy or sell.' This is not the mindset of chess players. As soon as an opponent moves a chess piece, a chess player thinks about possible strategies needed to reach the winning move. This is the basic goal for games of strategy.

The first set of scenarios formulated by chess players concerns the likely moves the opponent could make to reach the winning move. For each move of the opponent, a

player focuses on the set of moves needed to win. After every move, both players re-evaluate their scenarios and the possibilities they have to win.

Investing or decision making involves the same mindset. We analyze the available data related to the economic and financial environment. The analysis results in a set of possible scenarios about the future. These scenarios are ranked from most likely to least likely. An investment strategy is then developed for the most likely scenario, keeping in mind, however, that other scenarios may become relevant.

As soon as the markets move, new data become available about the economic and financial environment. So, we need to think like a chess player. We develop new scenarios and rank each scenario per their probability of happening. As the economic and financial environment slowly changes, the amount invested in a specific asset needs to change. By changing our portfolio gradually, we sustain our flexibility to adapt to the changing conditions. In other words, our strategies and investment portfolios must respond to the changing environment.

For instance, assume that short-term interest rates decline after a phase of weak economic conditions. The stock market soon bottoms and start rising. We should initially invest, say, 15% of our capital in stocks until more evidence suggests the conditions are in place for a bull market. New data, like strong growth in monetary aggregates and a strong dollar, support the view that the stock market is in an extended up-move. Our next move is to increase our investment in stocks. If however, in spite of weak economic conditions, short-term interest rates keep rising again, and stocks resume their decline, we should avoid investing more money in the stock market because the bull market scenario is not as likely as originally thought.

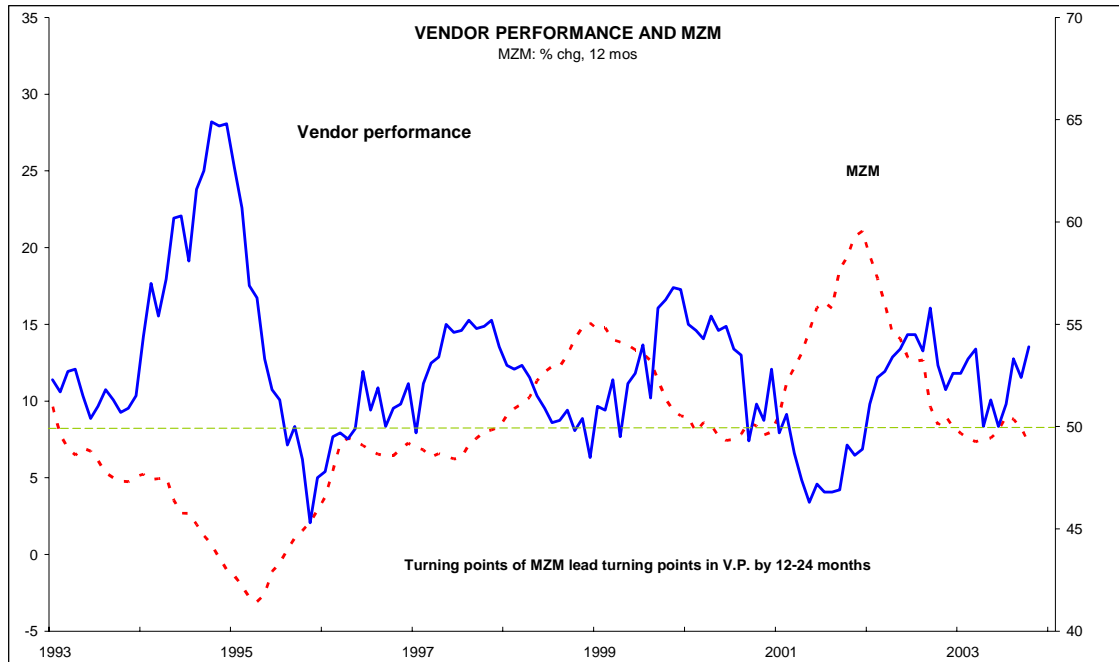
We need to continuously review, evaluate, and possibly modify our investment strategies and portfolios to act on the flow of new data available to us. A portfolio is a dynamic entity and must reflect the changing views of the portfolio manager. This is how professionals view their challenge of managing money. As individual investors, we need to realize we play a game of strategy against sophisticated players. The first step in financial survival is to recognize that the game is played against skilled opponents. Portfolio flexibility and risk management are two major ingredients to win the investment game.

### 3. Predicting turning points in the business cycle

When we know the direction in the growth of business activity, we can measure the risk of investing in commodities, bonds, and the stock market. A decline in the growth of business activity leads to a decline in commodities and bond yields. For this reason, knowing that growth in business activity is likely to decline gives us a framework to develop a strategy for investing in bonds and commodities (see below).

A rise in the growth of business activity leads to a rise in commodities and bond yields. This is the time to be more cautious about bonds and more aggressive in commodity related investments and inflation hedges.

The ISM report (manufacturing and non-manufacturing) is one of the most useful measures. It is reliable and timely. It provides excellent information on the growth of business activity and pricing pressures (Fig. 4.1). The vendor performance index (percent of purchasing managers reporting slower deliveries) is used because of its lower volatility as compared to the other indexes. It is available monthly.



**Chart 4.1.** The growth of the money supply (a leading indicator) leads turning points in the ISM index of vendor performance (a coincident indicator) by 12-24 months at peaks and troughs (Fig. 3.2). Lead-lags become smaller when volatility in economic growth declines.

Assume that the ISM index of vendor performance is declining and the growth of the money supply has risen for several months. We can expect a bottom in the ISM index. For instance in 1996, 1998, 2001, and 2003 the ISM index stopped declining. The continued and prolonged growth of the money supply suggests the ISM index is at a cyclical bottom. As more and more economic indicators turn up, the odds favor a pick up in economic growth. Investment strategies need to change to reflect an investment scenario dominated by a stronger economy.

Are these cyclical bottoms in the index a false reading? Since the growth of MZM has risen sharply for almost a year, we can anticipate the high probability that the ISM index of vendor performance is close to a cyclical bottom. As the growth of MZM keeps rising and the index begins to increase, we have to conclude that a cyclical bottom is at hand (Fig. 4.1). Thus, we initiate new investment strategies. Also, remember that the lead-lags tend to become smaller when economic volatility decreases.

## Predicting turning points of the business cycle

### **What is most likely to happen at a bottom?**

1. Rising growth in MZM (leading indicator)
2. Rising dollar (leading indicator)
3. Rising stock prices (leading indicator)
4. Declining interest rates (lagging indicators)

### **What is most likely to happen at a peak?**

1. Declining growth in MZM (leading indicator)
2. Declining dollar (leading indicator)
3. Declining stock prices (leading indicator)
4. Rising interest rates (lagging indicators)

The process of identifying a peak is similar to the process of identifying a bottom. If the growth of the money supply declines for several months, we should look for a peak in the ISM index of vendor performance. For instance in 1997, 2000, and 2002 the index stopped rising (Fig. 4.1). Are these cyclical peaks in the business cycle a false reading? Since the growth of the money supply declined for almost a year, we expect the ISM index is very likely at a cyclical peak. As the growth of MZM declines and the ISM index of vendor performance heads lower, we conclude the cyclical peak has passed and new investment strategies are in order.

We can improve our understanding of the process of identifying a peak and a trough in the business cycle by using more than one indicator. The use of more than one indicator helps to confirm the past, present, and future economic and financial events, and the probability of a business cycle peak or trough. These indicators do not turn at the same time. The more indicators follow the pattern of the ISM index, the higher confidence we can have in the nature and intensity of the turnaround.

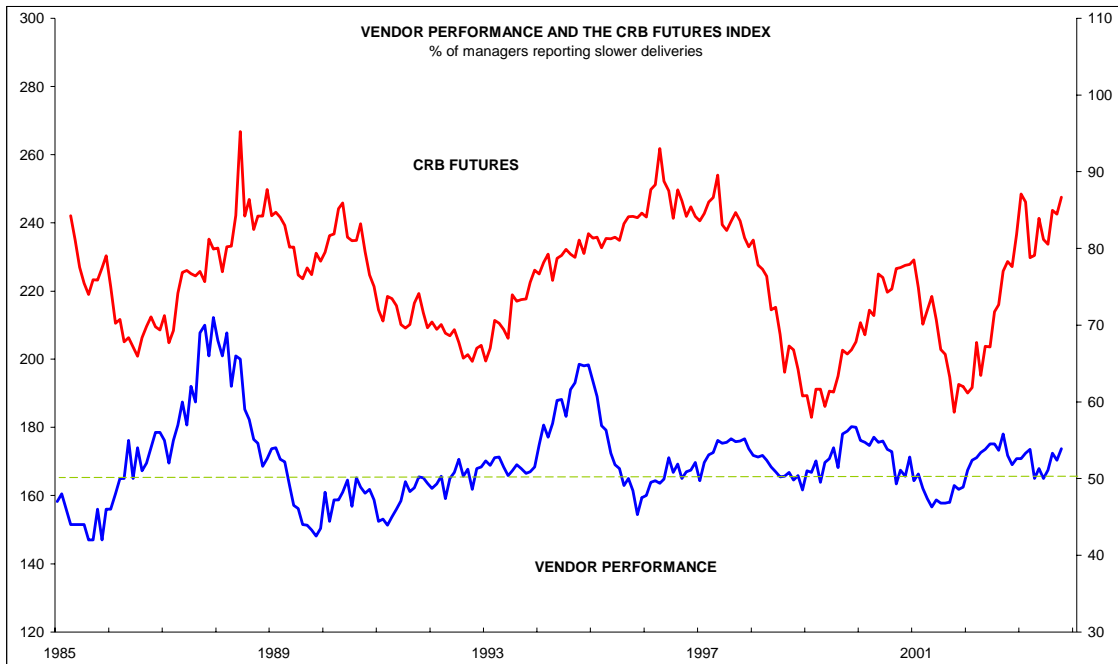
MZM and other measures of money supply like M1, M2, real M2, bank credit, yield curve, and the dollar are other leading indicators we use. The growth in industrial production and in employment validates the interpretation of the ISM indexes.

#### 4. Predicting turning points in commodities

The most important measure to predict the amplitude of the swing in commodity prices is the level of real short-term interest rates. (For more details please see Chapter 6 of my book *Profiting in Bull or Bear Markets*). When the ratio between the 13-week Treasury bills and inflation falls below 1.4, we should expect above average increases in commodity prices (including gold) and inflation. When real short-term interest rates rise above 1.4, cyclical swings are less pronounced.

As soon as a cyclical bottom for the ISM index is taking place (see discussion in the previous section), we should anticipate a cyclical bottom in commodity prices. The bottom in commodity prices is close when the ISM index rises above 50%. This is more likely if the growth in MZM is also rising. For instance, the bottoms in 1993, 1999, and 2002 in the CRB futures index were preceded or accompanied by bottoms in the ISM index (Fig. 4.2).

A decline in the growth of MZM followed by a decline in the ISM index is a strong indication that we should look for a peak in commodities. For instance in 1989, 1996, 2001, and 2003 the CRB futures index was preceded or accompanied by a decline in the ISM index.



**Chart 4.2** The ISM index of vendor performance leads turning points in the CRB futures index. This is an example of the more general rule that turning points of coincident indicators lead turning points of lagging indicators (Fig. 3.2). The lead-lags decrease with the volatility of the index of vendor performance.

As the odds rise that a cyclical bottom is occurring, we should gradually increase our investment in commodities or commodity driven investments. We should reduce our positions when the ISM index declines, the growth in MZM declines and commodities begin to sputter. As long as the ISM index of vendor performance stays below 50%, the odds favor a muted action in commodity markets.

## **Predicting turning points of commodities**

### **What is most likely to happen at a bottom?**

1. Rising growth in MZM (leading indicator)
2. Rising ISM vendor delivery index, possibly moving above 50% (coincident indicator)
3. Rising short-term interest rates (lagging indicator)

### **What is most likely to happen at a peak?**

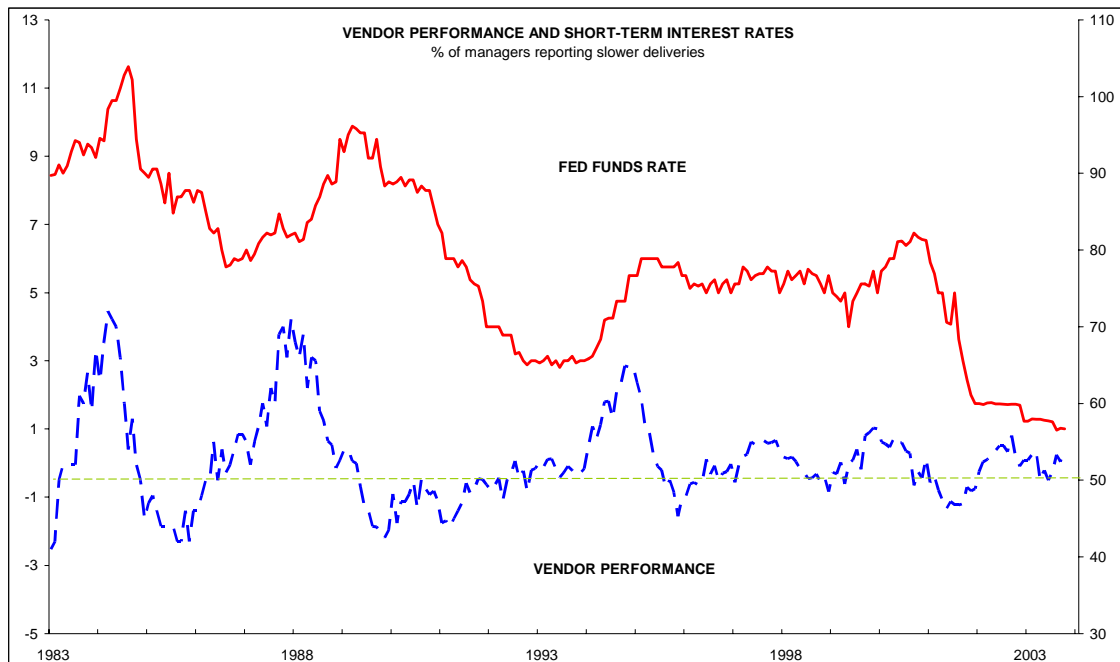
1. Declining growth in MZM (leading indicator)
2. Declining ISM vendor delivery index, possibly moving below 50% (coincident indicator)
3. Declining short-term interest rates (lagging indicators)

## 5. Predicting turning points in short-term interest rates

The market sets short-term interest rates. The demand for money is increased by the need to replenish inventories, pay wages, and reduce other short-term payables. The increased demand for money sets the trend of short-term interest rates. A strong economy encourages business and consumers to borrow to buy goods and to invest. Because of the strong demand for money, short-term interest rates rise. Short-term interest rates decline following a phase of slower economic growth, as demand for money declines. Slower economic growth reduces the incentive to buy and to invest. Thus, the demand for money declines and short-term interest rates head lower (Fig. 4.3).

The Fed attempts to understand the market level of short-term interest rates and fixes the inter-bank rate (Fed funds rate) as close as possible to the perceived market rate. During a crisis, the Fed forces short-term interest rates below the market rate. We can identify a crisis by the level of real short-term interest rates. Low real short-term interest rates signal aggressive easing by the Fed, determination to stimulate the economy, and avert a crisis.

Changes in the trend of short-term interest rates help establish which sectors and stocks are attractive and the level of risk in the equity market. Also the trend of short-term interest rates relates closely to the performance of high-yield bonds. When the configuration of the cyclical indicators points to a weaker economy and lower short-term interest rates, we should plan aggressive investment strategies in equities. If, on the other hand, conditions point to a much stronger economy and higher short-term interest rates, we should plan more defensive investment strategies. These implications are discussed in detail below.



**Chart 4.3** Declining short-term interest rates are preceded by slower growth in monetary aggregates and declining ISM index of vendor performance. Rising growth in the money supply and rising ISM index of vendor performance point to higher short-term interest rates. This is another example of the more general rule that turning points of coincident indicators lead turning points of lagging indicators (see Chart 3.2).

### **Predicting turning points of short-term interest rates**

#### **What is most likely to happen at a bottom?**

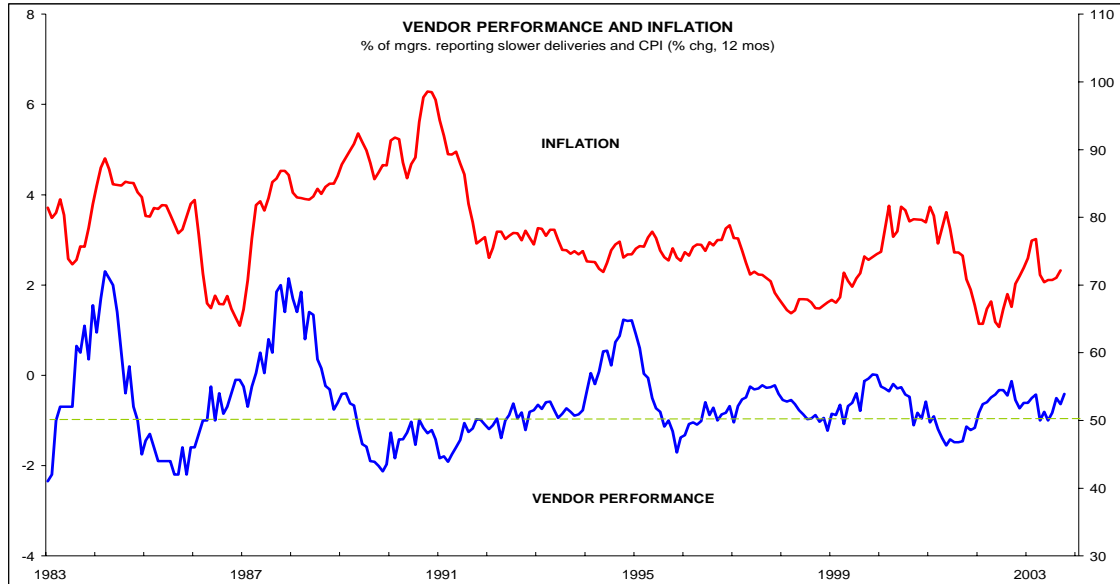
1. Rising growth in MZM (leading indicator)
2. Rising ISM vendor delivery index moving above 50% (coincident indicator)
3. Rising commodities (lagging indicator)

#### **What is most likely to happen at a peak?**

1. Declining growth in MZM (leading indicator)
2. Declining ISM vendor delivery index moving below 50% (coincident indicator)
3. Declining commodities (lagging indicators)

## 6. Predicting turning points in inflation

Inflation is driven by the strength of the economy (Fig. 4.4) and by the level of real short-term interest rates. Low real short-term interest rates are accompanied by periods of higher than average inflation. Phases of high real short-term interest rates have characterized times of declining or low inflation.



**Chart 4.4** Inflation is a lagging indicator like short-term interest rates, bond yields, and commodity prices. After a phase of rising ISM index of vendor performance, inflation rises. Inflation declines after a phase of declining ISM index of vendor performance. Inflation is likely to rise when the index is above 50% and decline when the ISM index of vendor deliveries declines below 50%.

### Predicting turning points of inflation

#### **What is most likely to happen at a bottom?**

1. Rising growth in MZM (leading indicator)
2. Rising ISM vendor delivery index and moving above 50% (coincident indicator)
3. Rising commodities and short-term interest rates (lagging indicator)

#### **What is most likely to happen at a peak?**

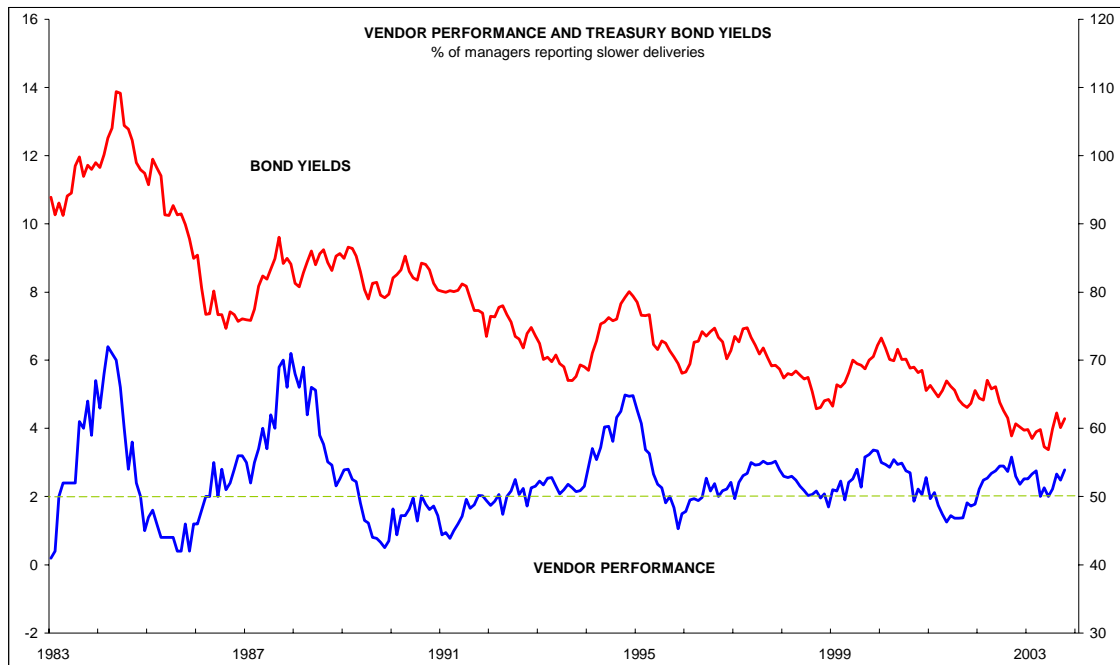
1. Declining growth in MZM (leading indicator)
2. Declining ISM vendor delivery index and moving below 50% (coincident indicator)
3. Declining commodities and short-term interest rates (lagging indicators)



## 6. Predicting turning points of bond yields

The process of predicting turning points in bond yields is similar to predicting the turning points in the other lagging indicators such as commodities, short-term interest rates, and inflation. Rising bond yields follow a stronger economy. The ISM index of vendor performance moves higher during such times. Yields decline following a phase of weaker economic growth. This is the time when the ISM index of vendor performance heads lower (Fig. 4.5).

A weaker economy followed by lower commodities, lower inflation and soft short-term interest rates is a strong indication we should use a more aggressive bond investment strategy and gradually lengthen the duration of the bond portfolio. A stronger economy followed by higher commodities, higher inflation and rising short-term interest rates suggest a more defensive bond strategy. During this phase, we shorten the duration of the bond portfolio. For more details on selecting bonds, please see *Profiting in Bull or Bear Markets*.



**Fig. 4.5.** Bond yields are a lagging indicator like short-term interest rates, inflation, and commodities. Bond yields rise after a phase of rising ISM index of vendor performance. They decline after a phase of declining ISM index of vendor performance. Bond yields are likely to rise when the index is above 50%. Bond yields decline when the ISM index of vendor deliveries declines below 50%.

After about a year of rising growth in the money supply, we should track closely the ISM index of vendor performance and other coincident indicators. As soon as the ISM index fails to decline following a protracted rise in the growth of MZM, we initiate a new set of strategies. The most likely scenario is that bond yields are close to a bottom and will move within a range for a few months. When the evidence shows the economy is improving and its strength has staying power then bond yields rise. Under this

scenario, we sell, in small amounts, bonds with long maturities and buy short-term issues like 13-week Treasury bills. If the economy remains strong in the following months, we continue the strategy. If, however, the economy remains sluggish, we adopt a wait-and-see strategy.

After about a year of declining growth in the money supply, we start to track the ISM index of vendor performance and other coincident indicators. As soon as the ISM index fails to rise, we initiate a new set of strategies. The most likely scenario is that bond yields are close to a top and will move within a range for a few months. When the evidence says the economy is weakening and its weakness is likely to last, bond yields decline. Under this scenario, we buy, in small amounts, bonds with longer maturity and sell short-term issues like 13-week Treasury bills. We should continue to follow this strategy if the economy remains weak in the following months. If, however, the economy strengthens again, we should adopt a wait-and-see strategy.

High-yield bonds are attractive long-term investment vehicles. Their price action follows closely the stock market. For this reason, high-yield bonds are a solid investment during phases of declining or stable short-term interest rates.

### **Predicting turning points of bond yields**

#### **What is most likely to happen at a bottom?**

1. Rising growth in MZM (leading indicator)
2. Rising ISM vendor delivery index and moving above 50% (coincident indicator)
3. Rising commodities, short-term interest rates and inflation (lagging indicators)

#### **What is most likely to happen at a peak?**

1. Declining growth in MZM (leading indicator)
2. Declining ISM vendor delivery index and moving below 50% (coincident indicator)
3. Declining commodities, short-term interest rates and inflation (lagging indicators)

## 7. Predicting turning points of stock prices

The stock market reflects the trends in financial liquidity (growth in monetary aggregates). An increase in liquidity drives stock prices higher. A decline in liquidity drives stock prices lower. When the financial and economic systems shrink the growth of liquidity, stocks are riskier. Risk decreases when the monetary aggregates grow at a faster rate. The lagging indicators (short-term interest rates, commodity prices, inflation, and bond yields) give us an excellent tool to establish the level of risk in the market (Fig. 4.6).

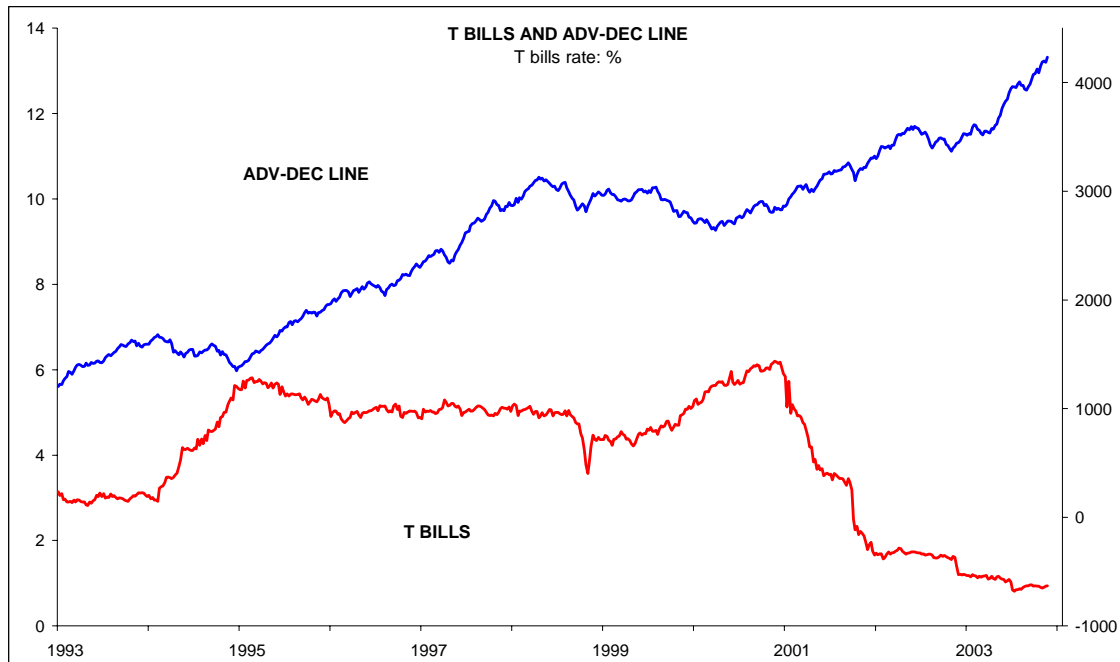
Recognize that by *the market* analysts may use an index to represent the collective moves of all the stocks traded on the NYSE or Nasdaq. One index, used for this purpose, is the S&P 500. The use of one index to the exclusion of other indexes may create problems. For instance, during the financial bubble of the late 1990s, the S&P 500 was overwhelmed by the soaring prices of technology stocks. When the bubble burst, both technology stocks and the S&P 500 plunged in price. The price action of the S&P 500, however, did not accurately show the trend of the broad market.

The advance-decline line (see *Profiting in Bull or Bear Markets* on how to compute it) is an excellent tool to assess the overall direction of the majority of stocks. As the S&P 500 sunk, the advance-decline line kept rising. So, the majority of stocks were actually going up. Investors who missed this development lost an important opportunity to profit. For this reason we should also track the advance-decline to see the movements of the market.

The stock market is a leading indicator. As shown in Fig. 3.2, the turning points in a lagging indicator are very useful in forecasting turning points of a leading indicator. A reliable lagging indicator is the rate on 13-week Treasury bills (T-bills). The sequence of turning points of T-bills and stocks is the following.

- A decline in T-bills reflects a significant slowdown of the economy.
- The Fed encourages banks to lend, to increase the liquidity in the system.
- The growth of the money supply increases.
- Within two months from the decline in T-bills, the stock market bottoms and rises as liquidity in the system increases.
- Stock prices go up at a significant rate in this initial phase. Market prices go up more rapidly when T-bills decline.
- Eventually the economy begins to improve and T-bills stop declining. The risk profile of the market changes. It begins to be less favorable to stocks.
- The growth of the money supply continues to rise but at a slower rate.
- The stock market prices follow closely the action of the monetary aggregates by rising at a slower pace. Wall Street observers begin to say, “The easy money has been made.”
- Now, the economy expands above its long-term trend of about 3%. Resources are stretched as demand for goods and services soar.
- T-bills begin to rise. This is the first sign risk is rising and we move to a more cautious investment strategy.
- After a short phase of time – about two months following the rise in T-bills – the growth in monetary aggregates begins to decline.

- Stocks follow closely the trend in liquidity and peak. A top in the advance-decline usually precedes by several months the peak in the market.
- After a phase of 12-24 months from the peak in the growth of monetary aggregates, the economy begins to slow down and correct the excesses (rising inflation, labor costs, interest rates, commodities) generated during the expansion phase.
- The economy continues to slow for about 12-24 months until T-bills (and the other lagging indicators) begin to decline.
- Now, financial risk declines to much lower levels and the stock market begins its cycle again by rising.



**Fig. 4.6.** The advance-decline line rises rapidly when the rate on 13-week Treasury bills declines. It rises as long as T-bills decline or stay stable. The advance-decline line peaks when T-bills begin to rise and the growth of the money supply declines.

## **Predicting turning points of stock prices**

### **What is most likely to happen at a bottom?**

1. Declining short-term interest rates (lagging indicator)
2. Declining bond yields (lagging indicator)
3. Declining commodity prices (lagging indicator)
4. Declining inflation (lagging indicator)
5. Rising growth in the money supply (leading indicator)

### **What is most likely to happen at a peak?**

1. Rising short-term interest rates (lagging indicator)
2. Rising bond yields (lagging indicator)
3. Rising commodity prices (lagging indicator)
4. Rising inflation (lagging indicators)
5. Declining growth in the money supply (leading indicator)

## 8. Developing an action plan

Serious investors must recognize the nature of the economic environment. In the 1970s, the financial markets were dominated by war and an aggressive social agenda. Washington decided to pursue these policies without an increase in taxes. The Fed accommodated the administration's plans by forcing short-term interest rates down, well below market rates. The outcome was very low real interest rates. The environment created by the Fed was inflationary as it encouraged people to borrow and to buy assets. The conventional wisdom in those days was to borrow because inflation was going to bail you out.

Rising inflation created volatile financial markets and business cycles. This nightmare lasted from 1968 to 1982 with the broad stock market averages finishing unchanged and interest rates and inflation soaring from 3% to more than 15%.

After 1982, the country realized that the inflationary policies of previous administrations were a total failure. The climate was right for a change in leadership. The Fed stopped controlling aggressively the level of short-term interest rates. They let them adjust to market rates, well above the level of inflation. High real interest rates placed a cap on inflation. So, inflation started to decline. As inflation declined, the business cycle stabilized and fluctuations became smoother and more predictable. Stocks and bonds soared until the financial orgy of the late 1990s stopped it. The financial bubble that burst in 2000 was driven by excessive growth in monetary aggregates rising at a rate well above the historical norm.

An understanding of the major trends is crucial for developing investment strategies. The economic environment does not change overnight. The ability to view the economic horizon allows us to adapt to the jolts of the markets and keep a steady course.

The important indicators to follow what is happening are:

- Growth in monetary aggregates.

If the money supply (M2) has grown below 6% for a long time, the economy grows slowly. If, on the other hand, the growth in M2 is above 6% for many years, expect a strong economy with an inflationary bias.

- Real short-term interest rates.

Low real short-term interest rates always accompany difficult economic events when crises are the norm. In the 1970s, the economy experienced war, social spending, and soaring inflation. In the early 1980s, the economy suffered in the wake of a real estate bubble. In the 1990s, the burst of a major financial bubble was accompanied by global overcapacity. These were periods when real short-term interest rates fell below their historical average of 1.4.

The development of a realistic plan to act within broad economic trends is based on the following considerations.

- Trends in the growth of monetary aggregates and the other leading indicators provide information about when the economy is going to turn around.
- The level of growth of the money supply points to the intensity of the business cycle.
- If the growth of monetary aggregates is expected to decline, the action plan should reflect caution toward stocks. If the growth in M2 is bottoming, the action plan should invest in stocks.
- Low real short-term interest rates point to higher than average inflation and stronger than average commodity markets. High real interest rates suggest the economy is characterized by decreasing or low inflation and a stable business cycle.
- When real interest rates are high, bonds are attractive because of stable or declining inflation. Commodity driven stocks are less attractive during such times, as discussed in future chapters.
- During times of low real interest rates, the action plan uses inflation hedge investments and recognizes that bonds may have reached a high risk point.

Using the scenarios discussed in this chapter, we assess the risk of the different markets like stocks, bonds, and commodities. Based on our assessment, we allocate our capital according to the risk of the markets and our personal tolerance for risk.

As we learn new information, our action plan adapts to our revised outlook. The biggest illusion is to believe that our present outlook based on today's data, is also going to be valid tomorrow. Our action plan has to be flexible and respond to the relevant data as they become available.

The investment game is played every day and every minute. The successful investor does not have a better crystal ball. The successful investor focuses on what is happening and quickly adapts to the relevant changes in the economic and financial environment.

## 10. Conclusions

The development of an action plan requires a view of the economic and financial environment. The serious investor cannot avoid this first step. Previous chapters outlined an approach based on a systematic analysis of the markets.

There are three groups of indicators: leading, coincident, and lagging indicators of the business cycle. The leading indicators reflect the trends in the financial markets and describe the status of the financial cycle. Leading indicators lead the business cycle. The coincident indicators provide information on the strength of the business cycle and its trend. The business cycle drives the important lagging indicators.

The lagging indicators help measure the excesses and risk in the system and in the financial markets. Lagging indicators measure the current excesses and corresponding risk in the economic and financial environment. The leading indicators react promptly to the rise in the lagging indicators. The radar like sensitivity of leading indicators senses that risk is rising when the lagging indicators rise and react by turning down. This downturn is followed by economic weakness after 12-24 months of their peak.

Our portfolio needs to adjust to these developments. Action plans and strategies need to gradually adapt and adjust to reflect these developments. This is the major point of this part of the book. Economic and financial outlooks used to develop strategies and action plans are not rigid. We adopt a flexible state of mind to manage our capital.

Managing money is a game of strategy. We play the game of investing around a global financial table. The best minds in the world play against us. When they win, they take our money away from us. They are knowledgeable and astute. Thus, we must flex with the situation. If we are losing, they must be winning. Act quickly. If we do not understand what is happening and greed or confusion clouds our thought process, sell and start all over again.

Greed and ignorance play a major role in losing money. Investing is a game of knowledge. No one has the final answer. The final answer does not exist. The world's

markets change continuously. An open mind and a flexible action plan is the primary attribute of a successful game player and investor. Setting realistic objectives is the next important strategic parameter. The main characteristic of every strategy is not to lose money. If we do not have that conviction, or know-how to measure financial risk, we should avoid playing the game.

The study of stock sectors is the main feature of Part 2. We will learn in detail the process of selecting stocks based on the understanding of the business and financial cycles and how the cycles drive stock sectors.